CLAIMS:

1. A nuclear magnetic resonance spectrometer for liquid-solution which comprises a superconductive magnet, a high-frequency transmission coil and a reception coil and in which a sample such as protein dissolved in a liquid-solution is charged in a sample tube of a diameter of 5 to 10 mm and is inserted substantially vertically, wherein a stationary magnetic field generated by said superconductive magnet is 11 T or more, the direction of the stationary magnetic field generated by said superconductive magnet is in the horizontal direction, a change per hour of proton nuclear magnetic resonance frequency due to a change of said stationary magnetic field is 1.0 Hz or less, the uniformity of said stationary magnetic field in a sample space is 1.0 Hz or less in terms of proton nuclear magnetic resonance frequency, said liquid-solution sample is inserted in the magnetic field center substantially vertically from above, and said reception coil is a solenoid coil inserted in the magnetic field center from below the spectrometer.

2. A nuclear magnetic resonance spectrometer for liquid-solution which comprises a superconductive magnet, a high-frequency transmission coil and a reception coil and in which a sample such as protein dissolved in a liquid-solution is charged in a sample tube of a diameter of 5 to 10mm and is inserted substantially vertically, wherein a stationary magnetic

field generated by said superconductive magnet is 11 T or more, the direction of the stationary magnetic field generated by said superconductive magnet is in the horizontal direction, a change per hour of proton nuclear magnetic resonance frequency due to a change of said stationary magnetic field is 1.0 Hz or less, the uniformity of said stationary magnetic field in a sample space is 1.0 Hz or less in terms of proton nuclear magnetic resonance frequency, said liquid-solution sample is inserted substantially vertically from above in the magnetic field center, and said reception coil is a solenoid coil made of a superconductive material, inserted in the magnetic field center from below the spectrometer and cooled to a superconductivity revealing temperature or less.

3. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 1, wherein said organic sample is a polymer organic compound, protein or ligand.

4. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 2, wherein said organic sample is a polymer organic compound, protein or ligand.

5. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 1, wherein said superconductive magnet includes paired split magnets for generating a magnetic field in the horizontal direction.

6. A nuclear magnetic resonance spectrometer for liquid -solution according to claim 2, wherein said superconductive magnet includes paired split magnets for generating a magnetic field in the horizontal direction.

7. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 1, wherein said superconductive magnet includes a toroidal magnet placed horizontally.

8. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 2, wherein said superconductive magnet includes a toroidal magnet placed horizontally.

9. A nuclear magnetic resonance spectrometer for liquid-solution which comprises a superconductive magnet, a high-frequency transmission coil and a reception coil and in which a sample such as protein dissolved in a liquid-solution is charged in a sample tube of a diameter of 5 to 10 mm and is inserted substantially vertically from above, wherein a stationary magnetic field generated by said superconductive magnet is 11 T or more, said superconductive magnet is a toroidal magnet placed in the horizontal direction, a change per hour of proton nuclear magnetic resonance frequency due to a change of said stationary magnetic field is 1.0 Hz or less, the magnetic field uniformity in a sample space is 1.0 Hz or less in terms of proton nuclear magnetic resonance

frequency, a plurality of liquid-solution samples are placed circumferentially of the toroidal coil at intervals of substantially equidistance, and the reception coil corresponding to each sample is a solenoid coil made of a superconductive material, inserted in the center of said magnetic field from below the spectrometer and cooled to a superconductivity revealing temperature or less.

10. A nuclear magnetic resonance spectrometer for liquid-solution according to claim 9, wherein said superconductive magnet is a toroidal magnet placed horizontally and in order to discriminate nuclear magnetic resonance signals generated from adjacent plural samples from each other, the magnetic field intensity applied to the individual samples is regulated.

11. A nuclear magnetic resonance spectrometer for liquid-solution wherein a liquid-solution sample is placed in the center of a magnetic field from below the spectrometer, a detection coil is a solenoid coil placed in the magnetic field center from below the spectrometer, and a superconductive magnet is right and left divided into split magnets.